



## Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact [support@jstor.org](mailto:support@jstor.org).

Messrs. Jordan and Van Vlieck publish at Appleton, Wisc., in small 4to, a Popular Key to the Birds, Reptiles and Fishes of the Northern States. When the emended edition of this praiseworthy endeavor to unlock this portion of our fauna to students is issued — we understand a revision is contemplated — we trust we may be authorized by the merits of the publication to speak of it more highly than we can at present.

Though somewhat foreign to our present purpose, reference in this connection to Prof. Reinhardt's continued studies on the osteology of Water-birds (Aft. Vid. Medd. Nat. For. Kjöb., 1873, 123) may not be wholly out of place, as we are convinced of the particularly important bearing such investigations have upon the classification of the future. In the late paper referred to, the wing-structure of Procellariidæ is treated with reference to the presence of the one or two supplementary ossicles of the elbow-joint, developed in connection with the "apophyse crochue" of the humerus, and the origin of the *extensor metacarpilongus* and *extensor plicæ alaris* (*tensor patigii* of some authors). He finds the bones in six genera and not in eight; but as the six are the richer in species, it is present in about two-thirds the species of the family. They are peculiar to the family, though other *Longipennes*, as well as *Alcidæ* and *Limicolæ* have the humeral hook. He points out their function, and proposes to divide the group primarily upon them. — ELLIOTT COUES.

HISTORY OF NORTH AMERICAN BIRDS.\*—The announcement of a work on the ornithology of North America, by the above-named gentlemen, is in itself a guarantee of its interest and scientific value; and the three volumes now published fully satisfy such expectations.

A work of this character, always welcome, is particularly opportune at this time, as the need of a comprehensive "History of North American Birds" has long been felt. For nearly a third of a century from the publication of Audubon's "Birds of America," in 1844, until the present year, no such book has appeared.† As long ago as 1858, the numerous Government expeditions had ac-

\* A History of North American Birds, by S. F. Baird, T. M. Brewer and R. Ridgway. Land Birds. 3 vols., large 8vo. Boston, Little and Brown.

† We exclude numerous monographs and more or less local lists; and also certain works, which, while valuable in themselves, contain little or nothing in regard to general and breeding habits.

cumulated so great a mass of material as to necessitate its publication, forming the well-known ninth volume of Pacific Railroad Reports. This was almost entirely technical, and limited to classification and description. Since this date many new species have been discovered and much additional information acquired, which find expression here, together with a résumé of everything of value previously published. The typography is all that could be desired, and misprints are noticeably few in number. The illustrations are excellent, and comprise a full length figure and outlines of the bill, wing, and foot of at least one species of each genus; and sixty-four plates representing the head, for the most part of life size, of each species. Volume I begins with an introduction giving the general anatomical characteristics of Aves, and their classification. Under the first family, or Turdidæ, are included sixteen species and seven varieties. Two only (*T. Pallasi*, with var. *nanus* and var. *Auduboni*, and *T. Swainsoni* with var. *ustulatus*) are found from ocean to ocean, being modified in certain regions as above. *Turdus confinis* is united to *migratorius* as a variety; and *T. iliacus* of Europe is admitted into our fauna, having been twice obtained in Greenland.

*Harporhynchus Lecontei* and *longirostris* are given as varieties respectively of *H. redivivus* and *rufus*. *Phyllopinus Kennicotti* Baird is a synonyme of *P. borealis* Blasius, the latter name having priority; it is a Northeastern Asian species, accidental in Alaska and perhaps in Europe (Heligoland). *Saxicola oenanthe* is now recognized as by no means rare in the northern parts of our continent, where it seems to become more abundant yearly. *Regulus Cuvieri* Aud. is included; a second specimen, together with the nests and eggs of the two common species, are still desiderata. The Parinæ comprise twelve species and three varieties, of which the latter two (*P. septentrionalis* and *occidentalis*) are races of *atricapillus*. *Sitta* includes three species only, *S. aculeata* being given as a variety of *Carolinensis*, and *pygmæa* (III, 502) as "probably a geographical form of *S. pusilla*." Our Creepers are regarded as *Certhia familiaris* var. *Americana* and var. *Mexicana*. Here, as in many other parts of the present work, the tendency to unite as races the closely allied forms of Europe and North America is shown, and, in our estimation at least, most judiciously. In regard to the present species we can say from careful personal observations, that the habits and notes (including

the "very distinct and varied song") are almost precisely identical both in this country and in Europe.

*Thryothorus Berlandieri* is united to *Ludovicianus* as a variety; and *Troglodytes Parkmanni* with *aedon*. *T. Americanus* Aud. is stated to be *aedon* "in dark, accidentally soiled plumage." *T. hyemalis* and *Alascensis* are given as geographical races of the European *T. parvulus*. *Motacilla alba* of Europe, like *Turdus iliacus*, has been twice obtained in Greenland, and more frequently in Iceland, and is therefore described. A third common European species, *Anthus pratensis*, has also been procured in Greenland, and more recently in Alaska.

Pages 177-325 are devoted to the Sylvicolidæ, and form a very interesting section. Fifty-two species and three varieties are enumerated, the genus *Dendroica* claiming twenty-three species. *Geothlypis Macgillivrayi* receives a distinct article on pp. 303-305; but on p. 297, and also in the appendix (III, 507), it is stated to be a geographical race of *G. Philadelphia*.

*Icteria longicauda* is given as a western form of *virens*. Thirteen species of Vireo, with three varieties *V. gilvus* var. *Swainsoni*; *V. solitarius* var. *Cassini* and *plumbeus*) are described. On pp. 363 and 364, *V. olivaceus* is stated to have occurred in England; but it is somewhat questionable whether the specimen obtained was not *V. altiloquus*.\*

The number of North American shrikes has been reduced to two, *Collurio borealis* and *C. Ludovicianus*, with var. *robustus* (= *elegans*, Baird nec Swainson) and var. *excubitoroides*. On pp. 426-428 is given a synopsis of the Certhiolæ, several of which (besides *C. Bahamensis*) may very possibly occur as stragglers in the southern extremity of Florida.

*Pyrrhula Cooperi* Ridgway, is united to *P. æstiva*, and our pine grosbeak to *Pinicola enucleator* of Europe. *Pyrrhula Cassini* Baird is "a well marked and distinct species," and not a variety of the European *P. coccinea*; it is a Siberian species accidental in Alaska, and has been once obtained in Belgium. *Loxia Americana* and *Mexicana* are united to *curvirostra* as varieties, and (I, 483) *L. leucoptera* to *bifasciata*; but in the appendix (III, 509) the latter are separated as "entirely distinct" species. The determination of our species of *Ægiothus* is as follows:—I. *A. canescens* of Greenland, with var. *exilipes* of continental Arctic America; II.

---

\* See a paper by Bree, in the London "Field," May 14, 1870, p. 417.

*A. linarius* of continental N. A., with var. *Holbölli* of Greenland in summer and continental N. A. in winter; III. *A. flavirostris* var. *Brewsteri*. *Leucosticte griseinucha* is united to *tephrocotis* as a variety, as are three others, *campestris* Baird, *littoralis* Baird, and (III, 509) *australis* Allen. The validity of *Passerculus princeps* Maynard, as distinguished from *Centronyx Bairdi*, is confirmed. *Passerculus alaudinus*, *Sandwichensis*, and *anthinus* are considered to be geographical forms of *P. savanna*; and *P. guttatus* is united to *rostratus*. In the Appendix (III, 513), speaking of the fact that *Coturniculus Lecontei* is intermediate between *C. Henslowi* and *Ammodromus caudacutus*, Prof. Baird remarks that "this renders it necessary to unite *Ammodromus* and *Coturniculus* into one genus, recognizing them as subgenera, definable chiefly by the different style of coloration of the superior surface in the two groups," the name *Ammodromus* having priority.

In the same appendix, p. 516, the capture in California of a specimen intermediate between *Passerella iliaca* and *Townsendi* is said to render it "extremely probable that all the known forms of this genus are but geographical races of one species."

To *Melospiza melodia* are allotted six varieties. *Alda arvensis* of Europe claims admission, it having been captured in Greenland and Bermuda; and it has also been introduced in the vicinity of New York City, apparently with success. *Eremophila cornuta* "appears to be absolutely identical" with *E. alpestris* of Europe, which latter name has priority. *Sturnella neglecta* is united to *S. magna* as a western race.

*Sturnus vulgaris*, having been once obtained in Greenland, is included. The raven of North America is considered to be a race of the European *C. corax*. Another judicious change is the referring of *Pica Hudsonica* and *Nuttalli* to *P. caudata* as varieties; *Nuttalli* being regarded as a local aberrant form of *Hudsonica*, differing chiefly in its yellow bill. The difficult family of Tyrannidæ receives a careful and interesting review. *Contopus Richardsoni* is given as *virens*, var.; and *Empidonax Trailli* as *pusillus*, var. *Chordeiles Henryi* is considered to be a western form of *C. popetue*.

Of humming birds ten species are described, including the doubtful *Thaumatias Linnæi*. *Lampornis mango* is mentioned in a foot note only.

The number of valid species of woodpeckers has been considerably reduced, only twenty-three being enumerated, including *Colaptes hybridus*, and omitting *Campephilus imperialis* as extralimital. *Picus Canadensis*, *Harrisi* and *Auduboni* are united to *villosus* as varieties; *Gairdneri* with *pubescens*; *Picoides Americanus* with *tridactylus* of Europe; *Sphyrapicus nuchalis* and *ruber* with *varius*. On p. 588, vol II, speaking of *Conurus Carolinensis* and the singular confusion, still existing in regard to its breeding habits, etc., Prof. Baird remarks that "in view of their very limited area and rapid diminution in numbers, there is little doubt but that their total extinction is only a matter of years, perhaps to be consummated within the lifetime of persons now living."

The third volume begins with the Raptores, the systematic portion of which is by Mr. Ridgway. Here, again, many of the allied boreal forms of North America and Europe are united as geographical races of the same species, and in our opinion with great justice.\* Fifteen species of owls are enumerated. It seems to be definitely settled that *Nyctale albifrons* Cassin is the young of *N. Acadica*. Three principal varieties of *Scops asio* are given: *Floridana*, *Maccalli* and *Kennicotti*. The dimorphic condition of this species and *Glaucidium ferrugineum* (as well as other extralimital species) is well compared to the melanistic state of certain hawks, in the one case reddish, in the other a more or less deep sooty brown being the color. *Spheotyto hypogæa* of North and Central America is given as a race of *S. cunicularia* of South America.

The Falconidæ comprise thirty-one species. The same general rule applies to the allied races of hawks as well as owls of Europe as compared with those of North America, namely, that in the latter the size is greater and the color much darker. This entire division is particularly interesting, many new facts in regard to the breeding habits, etc., of these birds, brought to light by several recent travellers in the Northwest, being published here for the first time. The synonymy of the North American gerfalcons

---

\*For example, the following are now given as the specific names of certain of our species:—*Nyctale Tengmalmi* var. *Richardsoni*; *Nyctea Scandiacæ* var. *arctica*; *Glaucidium passerinum* var. *Californicum*; *Falco lanarius* var. *polyagrus*; *F. communis* var. *anatum*; *F. lithofulco* var. *columbarius*; *Pandion haliaetus* var. *Carolinensis*; *Circus cyaneus* var. *Hudsonicus*; *Astur palumbarius* var. *atricapillus*; *Aquila chrysaetus* var. *Canadensis*, etc.

is given as follows:—I. *Falco* (*Hierofalco*) *gyrfalco* Linn., var. *candicans* Gm. (= *Groenlandicus* Daud.) of Greenland, wandering into Europe and North America; II. var. *Islandicus* Sabine, of Europe, Iceland, Greenland and North America; III. var. *sacer*, Forster, of interior of continental Arctic America; IV. var. *Labrador* Aud.

On page 254, a figure of the curious *Onychotes Gruberi* Ridgw. is given. *Buteo oxypterus* is united to *Swainsoni*, and *B. elegans* to *lineatus*. The American rough-legged hawks (excepting the western *Archibuteo ferrugineus*) are given as one species, and that a variety (*Sancti-johannis*) of the European *A. lagopus*; the melanistic condition being now correctly regarded as a frequent though purely individual peculiarity, like albinism. *Haliaetus albicilla* of Europe is included on account of its occurrence in Greenland. On page 329 it is stated that “the ‘bird of Washington’ of Audubon was, without the least doubt, a very large immature female (of the bald eagle) in about the second year.” It is to be hoped that this question is now finally settled.

The true *Meleagris gallopavo* is described as inhabiting the eastern province of North America, with var. *Mexicana* found from Texas and Arizona south into Mexico. The latter race is now considered to be the origin of the domesticated turkey.

*Canace Franklini* is united to *Canadensis* as a variety; *C. fuliginosus* and *Richardsoni* to *obscurus*; and *Bonasa umbelloides* and *Sabini* to *umbellus*. Three species of Ptarmigan are enumerated:—I. *Lagopus mutus* var. *rupestris* of Arctic America, Greenland and Iceland; II. *L. albus*, common to Europe and North America; III. *L. leucurus* of Northwest America. Audubon's *L. Americanus* is united to the first species.

In the Appendix are given a number of new facts in regard to the habits, distribution, and synonymy of species previously considered, and one or two new species are added, as *Harporhynchus Bendirei* Coes, *Setophaga picta*, *Peucea carpalis* Coes, etc. It may here be remarked that while certain species are noted as having been obtained in Europe, as *Galeoscoptes Carolinensis*, *Dendroica virens*, *Progne subis*, *Loxia leucoptera*, *Sturnella magna*, etc., similar mention is made of others whose claims to such notice are equally good, as *Turdus migratorius*, *Coccyzus Americanus*, *Harporhynchus rufus*, *Regulus calendula*, and a few others. A glossary of technical terms closes the volume.

In concluding this imperfect sketch we would only add that for years this will be the standard work on the ornithology of North America, and that the volume or volumes on "Water Birds" will be looked for with much interest by students and others interested in the birds of our country.—J. S. MERRILL.

## BOTANY.

DISTRIBUTION OF ALPINE PLANTS.—M. De Candolle delivered at the late Botanical Congress at Florence a communication on the causes of the distribution of rare plants on the Alps. The author (M. De Candolle) explained that the preglacial Alpine flora was not able to exert a great influence on the existing flora, inasmuch as the great changes which took place during the glacial period had necessarily swept away this ancient vegetation. He could not agree with those who considered the Alps as a centre of diffusion of a special flora, but believed them rather to be the refuge ground for the plants, which, as the glaciers retired, had found conditions more favorable to their existence than in places lower down. In proof of this he observed that the richest parts of the Alps for rare plants are those which were soonest deprived of glaciers, the ground having been thus cleared for the introduction of a more ancient flora, of which these rare plants are remnants. The southern, the eastern, and the western slopes of the Alps were successively cleared of the principal glaciers, and the Swiss Alps received their flora first from the south, and then from the east and west. The author then asks, "Why should the plants ascend as the glaciers retreat, and why should there be greater variety in this advancing vegetation?" In preglacial times there was more moisture in the climate of Europe, and consequently the flora was richer and more varied. After a time the climate became drier, and as the glaciers retired many plants were able to maintain themselves by advancing gradually over the ground as it became unoccupied by glaciers, finding there conditions more favorable for their growth. Hence one can deduce the law that the richness and variety of Alpine floras depend on the antiquity of their introduction.

Mr. Ball approved of M. De Candolle's theory to a certain extent, but he did not consider it sufficient to explain all the facts. When, for instance, a rare species is to be found in more than